

D. Kruse

Re-run

9



1638

RAW SEQUENCE LISTING

DATE: 06/04/2002

PATENT APPLICATION: US/09/462,629B

TIME: 11:00:17

Input Set : N:\paola\US09462629B.RAW

Output Set: N:\CRF3\06042002\I462629B.raw

1 <110> APPLICANT: Seulberger, Harald
 2 Lerchl, Jenms
 3 Schmidt, Ralf-Michael
 4 Krupinska, Karin
 5 Falk, Jon
 6 <120> TITLE OF INVENTION: DNA sequence encoding a hydroxyphenylpyruvate dioxygenase,
 and its
 7 overproduction in plants
 8 <130> FILE REFERENCE: 0050/48141
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/462,629B
 10 <141> CURRENT FILING DATE: 2000-01-11
 11 <150> PRIOR APPLICATION NUMBER: PCT/EP98/03832
 12 <151> PRIOR FILING DATE: 1998-06-23
 13 <160> NUMBER OF SEQ ID NOS: 16
 14 <170> SOFTWARE: WordPerfect version 6.1
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 1565
 18 <212> TYPE: DNA
 19 <213> ORGANISM: hppd from barley
 20 <220> FEATURE:
 21 <221> NAME/KEY: CDS
 22 <222> LOCATION: 9 ... 1313
 23 <400> SEQUENCE: 1
 24 cgacacacc atg ccg ccc acc ccc acc acc ccc gcg gct acc ggc gcc gcc50
 25 Met Pro Pro Thr Pro Thr Thr Pro Ala Ala Thr Gly Ala Ala
 26 1 5 10
 27 gcc gcg gtg acg ccg gag cac gcg cga ccg cac cga atg gtc cgc ttc98
 28 Ala Ala Val Thr Pro Glu His Ala Arg Pro His Arg Met Val Arg Phe
 29 15 20 25 30
 30 aac ccg cgc agc gac cgc ttc cac acg ctc tcc ttc cac cac gtc gag146
 31 Asn Pro Arg Ser Asp Arg Phe His Thr Leu Ser Phe His His Val Glu
 32 35 40 45
 33 ttc tgg tgc gcg gac gcc gcc tcc gcc gcc ggc cgc ttc gcg ttc gcg194
 34 Phe Trp Cys Ala Asp Ala Ala Ser Ala Ala Gly Arg Phe Ala Phe Ala
 35 50 55 60
 36 ctc ggc gcg ccg ctc gcc gcc agg tcc gac ctc tcc acg ggg aac tcc242
 37 Leu Gly Ala Pro Leu Ala Ala Arg Ser Asp Leu Ser Thr Gly Asn Ser
 38 65 70 75
 39 gcg cac gcc tcc cag ctg ctc cgc tcg ggc tcc ctc gcc ttc ctc ttc290
 40 Ala His Ala Ser Gln Leu Leu Arg Ser Gly Ser Leu Ala Phe Leu Phe
 41 80 85 90
 42 acc gcg ccc tac gcc aac ggc tgc gac gcc gcc acc gcc tcc ctg ccc338
 43 Thr Ala Pro Tyr Ala Asn Gly Cys Asp Ala Ala Thr Ala Ser Leu Pro
 44 95 100 105 110

ENTERED

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45   tcc ttc tcc gcc gac gcc gcg cgc cgg ttc tcc gcc gac cac ggg atc386
46   Ser Phe Ser Ala Asp Ala Ala Arg Arg Phe Ser Ala Asp His Gly Ile
47                               115                               120                               125
48   gcg gtg cgc tcc gta gcg ctg cgc gtc gca gac gcc gcc gag gcc ttc434
49   Ala Val Arg Ser Val Ala Leu Arg Val Ala Asp Ala Ala Glu Ala Phe
50                               130                               135                               140
51   cgc gcc agt cgt cga cgg ggc gcg cgc ccg gcc ttc gcc ccc gtg gac482
52   Arg Ala Ser Arg Arg Arg Gly Ala Arg Pro Ala Phe Ala Pro Val Asp
53                               145                               150                               155
54   ctc ggc cgc ggc ttc gcg ttc gcg gag gtc gag ctc tac ggc gac gtc530
55   Leu Gly Arg Gly Phe Ala Phe Ala Glu Val Glu Leu Tyr Gly Asp Val
56                               160                               165                               170
57   gtg ctc cgc ttc gtc agc cac ccg gac ggc acg gac gtg ccc ttc ttg578
58   Val Leu Arg Phe Val Ser His Pro Asp Gly Thr Asp Val Pro Phe Leu
59   175                               180                               185                               190
60   ccg ggg ttc gag ggc gta acc aac ccg gac gcc gtg gac tac ggc ctg626
61   Pro Gly Phe Glu Gly Val Thr Asn Pro Asp Ala Val Asp Tyr Gly Leu
62                               195                               200                               205
63   acg cgg ttc gac cac gtc gtc ggc aac gtc ccg gag ctt gcc ccc gcc674
64   Thr Arg Phe Asp His Val Val Gly Asn Val Pro Glu Leu Ala Pro Ala
65                               210                               215                               220
66   gca gcc tac atc gcc ggg ttc acg ggg ttc cac gag ttc gcc gag ttc722
67   Ala Ala Tyr Ile Ala Gly Phe Thr Gly Phe His Glu Phe Ala Glu Phe
68   225                               230                               235
69   acg gcg gag gac gtg ggc acg acc gag agc ggg ctc aac tcg gtg gtg770
70   Thr Ala Glu Asp Val Gly Thr Thr Glu Ser Gly Leu Asn Ser Val Val
71   240                               245                               250
72   ctc gcc aac aac tcg gag ggc gtg ctg ctg ccg ctc aac gag ccg gtg818
73   Leu Ala Asn Asn Ser Glu Gly Val Leu Leu Pro Leu Asn Glu Pro Val
74   255                               260                               265                               270
75   cac ggc acc aag cgc cgg agc cag ata cag acg ttc ctg gaa cac cac866
76   His Gly Thr Lys Arg Arg Ser Gln Ile Gln Thr Phe Leu Glu His His
77   275                               280                               285
78   ggc ggc ccg ggc gtg cag cac atc gcg gtg gcc agc agt gac gtg ctc914
79   Gly Gly Pro Gly Val Gln His Ile Ala Val Ala Ser Ser Asp Val Leu
80   290                               295                               300
81   agg acg ctc agg aag atg cgt gcg cgc tcc gcc atg ggc ggc ttc gac962
82   Arg Thr Leu Arg Lys Met Arg Ala Arg Ser Ala Met Gly Gly Phe Asp
83   305                               310                               315
84   ttc ctg cca ccc ccg ctg ccg aag tac tac gaa ggc gtg cga cgc ctt1010
85   Phe Leu Pro Pro Pro Leu Pro Lys Tyr Tyr Glu Gly Val Arg Arg Leu
86   320                               325                               330
87   gcc ggg gat gtc ctc tcg gag gcg cag atc aag gaa tgc cag gag ctg1058
88   Ala Gly Asp Val Leu Ser Glu Ala Gln Ile Lys Glu Cys Gln Glu Leu
89   335                               340                               345                               350
90   ggt gtg ctc gtc gat agg gac gac caa ggg gtg ttg ctc caa atc ttc1106
91   Gly Val Leu Val Asp Arg Asp Asp Gln Gly Val Leu Leu Gln Ile Phe
92   355                               360                               365
93   acc aag cca gta ggg gac agg ccg acc ttg ttc ctg gag atg atc cag1154

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94   Thr Lys Pro Val Gly Asp Arg Pro Thr Leu Phe Leu Glu Met Ile Gln
95           370           375           380
96   agg atc ggg tgc atg gag aag gac gag aga ggg gaa gag tac cag aag1202
97   Arg Ile Gly Cys Met Glu Lys Asp Glu Arg Gly Glu Tyr Gln Lys
98           385           390           395
99   ggt ggc tgc ggc ggg ttc ggc aaa ggc aac ttc tcc gag ctg ttc aag1250
100  Gly Gly Cys Gly Gly Phe Gly Lys Gly Asn Phe Ser Glu Leu Phe Lys
101      400           405           410
102  tcc att gaa gat tac gag aag tcc ctt gaa gcc aag caa tct gct gca1298
103  Ser Ile Glu Asp Tyr Glu Lys Ser Leu Glu Ala Lys Gln Ser Ala Ala
104      415           420           425           430
105  gtt cag gga tca taggatagaa gctggtcctt gtatcatggt ctcatggagc 1350
106  Val Gln Gly Ser
107  aaaagaaaac aatgttggtt gtaatatgcg tcgcacaatt atatcaatgt tataattgggt1410
108  gaagctgaag acagatgtat cctatgtatg atgggtgtaa tggatggtag aggggctcac1470
109  acatgaagaa aatgtagcgt tgacattggt gtacaatctt gcttgcaagt aaaataaaga1530
110  acagattttg agttctgcaa aaaaaaaaaa aaaaaa 1565
112 <210> SEQ ID NO: 2
113 <211> LENGTH: 434
114 <212> TYPE: PRT
115 <213> ORGANISM: hppd from barley
116 <400> SEQUENCE: 2
117  Met Pro Pro Thr Pro Thr Thr Pro Ala Ala Thr Gly Ala Ala Ala Ala
118      1           5           10           15
119  Val Thr Pro Glu His Ala Arg Pro His Arg Met Val Arg Phe Asn Pro
120           20           25           30
121  Arg Ser Asp Arg Phe His Thr Leu Ser Phe His His Val Glu Phe Trp
122           35           40           45
123  Cys Ala Asp Ala Ala Ser Ala Ala Gly Arg Phe Ala Phe Ala Leu Gly
124           50           55           60
125  Ala Pro Leu Ala Ala Arg Ser Asp Leu Ser Thr Gly Asn Ser Ala His
126           65           70           75           80
127  Ala Ser Gln Leu Leu Arg Ser Gly Ser Leu Ala Phe Leu Phe Thr Ala
128           85           90           95
129  Pro Tyr Ala Asn Gly Cys Asp Ala Ala Thr Ala Ser Leu Pro Ser Phe
130           100          105          110
131  Ser Ala Asp Ala Ala Arg Arg Phe Ser Ala Asp His Gly Ile Ala Val
132           115          120          125
133  Arg Ser Val Ala Leu Arg Val Ala Asp Ala Ala Glu Ala Phe Arg Ala
134           130          135          140
135  Ser Arg Arg Arg Gly Ala Arg Pro Ala Phe Ala Pro Val Asp Leu Gly
136           145          150          155          160
137  Arg Gly Phe Ala Phe Ala Glu Val Glu Leu Tyr Gly Asp Val Val Leu
138           165          170          175
139  Arg Phe Val Ser His Pro Asp Gly Thr Asp Val Pro Phe Leu Pro Gly
140           180          185          190
141  Phe Glu Gly Val Thr Asn Pro Asp Ala Val Asp Tyr Gly Leu Thr Arg
142           195          200          205
143  Phe Asp His Val Val Gly Asn Val Pro Glu Leu Ala Pro Ala Ala Ala

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RAW SEQUENCE LISTING

DATE: 06/04/2002

PATENT APPLICATION: US/09/462,629B

TIME: 11:00:17

Input Set : N:\paola\US09462629B.RAW

Output Set: N:\CRF3\06042002\I462629B.raw

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144          210          215          220
145 Tyr Ile Ala Gly Phe Thr Gly Phe His Glu Phe Ala Glu Phe Thr Ala
146          225          230          235          240
147 Glu Asp Val Gly Thr Thr Glu Ser Gly Leu Asn Ser Val Val Leu Ala
148          245          250          255
149 Asn Asn Ser Glu Gly Val Leu Leu Pro Leu Asn Glu Pro Val His Gly
150          260          265          270
151 Thr Lys Arg Arg Ser Gln Ile Gln Thr Phe Leu Glu His His Gly Gly
152          275          280          285
153 Pro Gly Val Gln His Ile Ala Val Ala Ser Ser Asp Val Leu Arg Thr
154          290          295          300
155 Leu Arg Lys Met Arg Ala Arg Ser Ala Met Gly Gly Phe Asp Phe Leu
156          305          310          315          320
157 Pro Pro Pro Leu Pro Lys Tyr Tyr Glu Gly Val Arg Arg Leu Ala Gly
158          325          330          335
159 Asp Val Leu Ser Glu Ala Gln Ile Lys Glu Cys Gln Glu Leu Gly Val
160          340          345          350
161 Leu Val Asp Arg Asp Asp Gln Gly Val Leu Leu Gln Ile Phe Thr Lys
162          355          360          365
163 Pro Val Gly Asp Arg Pro Thr Leu Phe Leu Glu Met Ile Gln Arg Ile
164          370          375          380
165 Gly Cys Met Glu Lys Asp Glu Arg Gly Glu Glu Tyr Gln Lys Gly Gly
166          385          390          395          400
167 Cys Gly Gly Phe Gly Lys Gly Asn Phe Ser Glu Leu Phe Lys Ser Ile
168          405          410          415
169 Glu Asp Tyr Glu Lys Ser Leu Glu Ala Lys Gln Ser Ala Ala Val Gln
170          420          425          430
171 Gly Ser
173 <210> SEQ ID NO: 3
174 <211> LENGTH: 14
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial sequence
177 <220> FEATURE:
178 <221> NAME/KEY: misc_feature
179 <222> LOCATION: 1.. 14
180 <223> OTHER INFORMATION: primer
181 <400> SEQUENCE: 3
182 tttttttttt ttag 14
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 14
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial sequence
188 <220> FEATURE:
189 <221> NAME/KEY: misc_feature
190 <222> LOCATION: 1.. 14
191 <223> OTHER INFORMATION: primer
192 <400> SEQUENCE: 4
193 tttttttttt ttca 14
195 <210> SEQ ID NO: 5

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RAW SEQUENCE LISTING

DATE: 06/04/2002

PATENT APPLICATION: US/09/462,629B

TIME: 11:00:17

Input Set : N:\paola\US09462629B.RAW

Output Set: N:\CRF3\06042002\I462629B.raw

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196 <211> LENGTH: 14
197 <212> TYPE: DNA
198 <213> ORGANISM: Artificial sequence
199 <220> FEATURE:
200 <221> NAME/KEY: misc_feature
201 <222> LOCATION: 1.. 14
202 <223> OTHER INFORMATION: primer
203 <400> SEQUENCE: 5
204      tttttttttt ttac                                14
206 <210> SEQ ID NO: 6
207 <211> LENGTH: 14
208 <212> TYPE: DNA
209 <213> ORGANISM: Artificial sequence
210 <220> FEATURE:
211 <221> NAME/KEY: misc_feature
212 <222> LOCATION: 1.. 14
213 <223> OTHER INFORMATION: primer
214 <400> SEQUENCE: 6
215      tttttttttt ttgt                                14
217 <210> SEQ ID NO: 7
218 <211> LENGTH: 10
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial sequence
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: 1.. 10
224 <223> OTHER INFORMATION: primer
225 <400> SEQUENCE: 7
226      tacaacgagg                                    10
228 <210> SEQ ID NO: 8
229 <211> LENGTH: 10
230 <212> TYPE: DNA
231 <213> ORGANISM: Artificial sequence
232 <220> FEATURE:
233 <221> NAME/KEY: misc_feature
234 <222> LOCATION: 1.. 10
235 <223> OTHER INFORMATION: primer
236 <400> SEQUENCE: 8
237      ggaaccaatc                                    10
239 <210> SEQ ID NO: 9
240 <211> LENGTH: 10
241 <212> TYPE: DNA
242 <213> ORGANISM: Artificial sequence
243 <220> FEATURE:
244 <221> NAME/KEY: misc_feature
245 <222> LOCATION: 1.. 10
246 <223> OTHER INFORMATION: primer
247 <400> SEQUENCE: 9
248      aaactccgtc                                    10

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/462,629B

DATE: 06/04/2002
TIME: 11:00:18

Input Set : N:\paola\US09462629B.RAW
Output Set: N:\CRF3\06042002\I462629B.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/462,629B

DATE: 06/04/2002

TIME: 11:00:18

Input Set : N:\paola\US09462629B.RAW

Output Set: N:\CRF3\06042002\I462629B.raw

L:9 M:270 C: Current Application Number differs, Wrong Format